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For Release

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BOEING SELECTED TO BUILD WORLD'S LARGEST WINDMILL

The largest windmill in history will be built during the next two years in a test program conducted by the Energy Research and Development Administration (ERDA) and managed by NASA.

The two agencies have selected the Boeing Engineering and Construction Co., a division of the Boeing Co. of Seattle, Wash., to design and build the new system.

NASA and ERDA are negotiating a contract with Boeing for about $10 million to design, build, assemble, install and test a nominal 2.5 megawatt (2,500 kilowatt) electrical generating system, with blades spanning 91 meters (300 feet) in diameter.

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The large wind turbine will be designed for sites with a mean wind speed of 23 kilometers per hour (14 miles per hour). Sites with such modest winds are relatively common throughout the United States. The wind turbine is scheduled to be built in late 1979 at a site to be selected by ERDA. The project will be directed for ERDA by NASA's Lewis Research Center in Cleveland.

Although experimental in nature, the system will be located at a utility company site and will supply electricity to the local electrical system for use by the general public. The purpose of this system is to investigate the economics and operating characteristics of large wind turbines when coupled to conventional power plants. This project will place special emphasis on developing a wind turbine capable, when produced in quantities of up to 100 units, of providing electricity at a cost approaching that of conventional power plants.

The experimental wind turbine (the name for modern electrical generating windmills) is part of ERDA's program to develop wind energy systems and test their practicality as a potential source of energy. Lewis Research Center, with expertise in aerodynamics and structures, directs this element of ERDA's wind energy program.

Research to date has indicated that the cost of energy from the wind turbine should decrease as the size of the machine increases.

The largest currently operating wind turbine is the 100-kw 39-m (125-ft.) diameter system built for ERDA by the Lewis Center at its Plum Brook test area near Sandusky, Ohio. This test machine is being used to identify and solve technical problems associated with large wind turbines and to test advanced components for future wind turbines.

Three more powerful versions of this 39-m (125-ft.) diameter system are being built by Lewis and the Westinghouse Electric Corp. These three machines will be installed at utility sites recently selected by ERDA: Clayton, N.M.; Block Island, R.I.; and Culebra, Puerto Rico. These sites were selected from 17 candidate sites proposed by utility companies across the nation.

In addition, two 2,000-kw 61-m (200-ft.) diameter machines are presently being developed for ERDA by the General Electric Co. in Valley Forge, Pa. These wind turbines are designed for utility sites with a mean wind speed of 29 km/hr (18 mph).

These two machines will be installed at utility sites in late 1978 and early 1979. These sites will be selected by ERDA from the remaining 14 candidate sites proposed by the utility industry.

ERDA is also investigating and developing small (up to 10 kw) windmills that could be used by individual rural homes or farms, and performing research and development on advanced unconventional windmills.

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